UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,396	11/12/2003	Nadarajah Asokan	060091.00106	4400

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EXAMINER
D AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 October 2007</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3,6-9,13-15,17,24-27 and 32-38* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-3, 24-26 and 32-38* is/are rejected.

7)☒ Claim(s) *6-9,13-15,17 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 10-29-2007 has been entered.

➢ The examiner puts forth a new Non-Final rejection since he mistakenly identified the applicant's identified IDS art as having the wrong pub date. The examiner notes that the IDS includes a "retrieved date" which has no bearing on it's pub date. The two NPL documents furnished have pub dates of 2000 which categorizes them as prior art.

➢ This new Non-Final uses IDS art.

➢ The amendment overcomes the examiner's USC 112 1st rejection. He notes that the response includes useful information as to the applicant's design consideration. Furthermore, the USC 112 1st is used to reflect a problem with the specification but it is tied to the claim(s) as well. Hence the examiner read the claim and then could not find support (or an interpretation) for where the specification discussed this concept.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-3, 24-26 and 32-38 rejected under 35 U.S.C. 103(a) as being

unpatentable over RFC 2977 and further in view of Tsuda and Lee.

As per **claims 2-3, 24-26 and 32-36**, RFC 2977 teaches a method comprising:

maintaining in a mobile communication system subscriber's location/network

information (RFC 2977 teaches the concept of Mobile IP where a user roams as well as

home and foreign/local domains which inherently requires the "network" to keep track of

where the mobile unit is located. Furthermore, the HLR and VLR components perform

this same task. Also Mobile IP tracks/understands the network-address of which LAN

segment the user is connected to.);

receiving a message from subscriber's user equipment, said message indicating

that an address of a certificate provisioning gateway for certificate issuance and delivery

procedure in a visited network is requested by the subscriber's user equipment (Section

3 teaches a "Basic Model" whereby a roaming user connects to an "agent/gateway

function" which then seeks to perform back-end operations to determine if the local or

home domain must be contacted to verify the user. See figure 1.),

the certificate provisioning gateway serving at least one certificate authority, the

message further comprising the address of the certificate provisioning gateway (figures

1-2 show and Sections 4-5 teach requests/serving of home/foreign authority.

Furthermore, Mobile IP inherently requires interaction between the home and foreign

authorities to verify/authenticate a user);

determining, in response to receiving the message, on the basis of the

subscriber's network information, an address of the certificate provisioning gateway

(figures 1-2 and sections 4-5 discuss the interaction between home/local authorities
when a Mobile IP user roams from one domain to another domain):

checking whether or not the address in the message corresponds to the address
determined on the basis of the network information (figures 1-2 and sections 4-5 teach
that the network/IP address of the Mobile IP user will be identified and a decision made
as to contact the home domain to verify/authenticate the user); and

but is silent on use of location information AND if they do not correspond to
each other, using the address determined on the basis of the location information.

RFC 2977 focuses more on the underpinnings of IP and MOBILE IP where the
user's IP address and current Network Address are used to determine the "location" of
the user and if assistance from the Home (authority/agent) is needed. The term location
for RFC 2977 is not a geographic position, but rather a correlation between the user's
home IP address and their current connection to a LAN segment (eg. they are in their
home domain/location if the network LAN Addresses match and/or they are in a foreign
domain/location if they do not match).

As previously put forth in earlier rejections, **Tsuda** teaches a network using
Mobile IP and AAA protocols for general authentication and Accounting (eg. for a
certificate issuance service in another network than a home network. See figure 10
shows mobile user registering with a foreign agent in a non-home network. Abstract
and figure 1 show a system that allows a user to be authenticated to roam to various
networks and use services whereby AAA information is transmitted to/from a user's
device. Also see figure 6, Step 2 and figure 10 which shows an authentication
procedure and figure 10 shows overall procedure whereby data is sent to/from the
mobile's AAA-H/AAA-V servers in order to authenticate said user as he roams. Figures
10-11 show mobile authenticating with AAA and P#186 discusses use of certificate
issuance via certificate authority. Furthermore, he also teaches a Mobile IP network,
figure 1 shows a mobile user who has roamed from a home network #1001/#1010 to a
visited network #1002/#1010 connected via IP which inherently subnets a network into
smaller networks and their location is known based on where the engineer has
positioned the local access router/BTS. Lastly, the mobile network maintains user

location in an HLR and Tsuda teaches both home and foreign networks, P#67 and P#71, which inherently describes the concept of _knowing where the user is (eg. maintaining a subscriber's location in the network)_ since it is either in the (one) home network or in any of other foreign networks -- see figure 18 which shows multiple foreign subnets, #1002/#1004.

With regard to using geographical position data to assist with network configuration/authentication, **Lee** teaches an "automated process" to enable nomadic roaming such that a user can request connectivity to a device whereby an agent determines the user has roamed into a visited network and translates the request into a connection to a new, similar device (Abstract). This alleviates the need for the user to track/determine if they have roamed into a visited network and then request a new device address.

As per **claim 7,** Tsuda teaches claim 6, further comprising, performing the authentication is an application level authentication (figure 10 shows the process by which the user's authentication "program" communicates with other AAA server programs for authentication. Also se figure 11 and figures 12a-d which show packet layout. Hence the examiner interprets Tsuda's design as the AAA process being an application level authentication since it "rides on top of" the Mobile IP layer).

As per **claims 32-36,** the combo teaches claim 28, **but is silent on** wherein the certificate provisioning gateway is configured, in response to receiving in the message further an address of a certificate provisioning gateway, to check whether or not the address which the message indicated corresponds to the address determined on the basis of the location information; and if they do not correspond to each other, to select the address determined on the basis of the location information OR to use the maintained location information if it does not correspond to the location information in the message OR to send an error indication.

Tsuda teaches a user roaming among home/foreign networks while Kim teaches location determination and Lee teaches automatic updates for the user regarding

network information as said user roams. Hence, while one skilled expects that Lee's teachings would always correctly correlate the address in the message to the location information, it is possible for it to be incorrect and thus either send an error or select which one is thought to be right.

The examiner takes **Official Notice** that one skilled would need to decide the correct user's location if there is a discrepancy and/or send an error message.

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that the address is correlated to the location, to provide means for determining if the address of the CA is wrong and/or if a discrepancy exists and which address to use.

As per **claim 37,** the combo teaches claim 1, **but is silent on** wherein a certificate authority is a trusted third party.

The examiner takes **Official Notice** that a certificate authority is typically considered a trusted third party since it is not the sender or receiver, but rather an entity in between which known (and trusted) by both parties.

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that a CA is a trusted third party, to provide means for the two parties to communicate via a third entity that is trusted by both.

As per **claim 38,** the combo teaches claim 1, **but is silent on** wherein a certificate authority is a trusted third party and does not include an authorization, authentication and accounting server.

The examiner takes **official notice** that a certificate authority is sometimes used in a situation where an AAA server is (or has not been) used/contacted.

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that a CA does not use the AAA, to provide means for not requiring need for services from an AAA server when the user has previously been authenticated within the roamed network(s), eg. during initial registration.

Allowable Subject Matter

Claims 6-9 and 13-15, 17 and 27 objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-

272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

STEVE M. D'AGOSTA
PRIMARY EXAMINER

11-9-07